

REMARKS

Applicant respectfully requests reconsideration and allowance of the subject Application. Claims 1-14 are cancelled. Claims 30-37 are newly added to more definitely claim the subject invention and are directed to the same invention as previously elected and examined. Support for the foregoing amendments can be found in the original specification, claims, and drawings – no new matter has been introduced.

New Claims 30-37 are not in excess of the number of claims previously paid for; and therefore Applicant does not have to file additional claim fees.

Applicant's amendments and remarks after Final are appropriate under 37 C.F.R. §1.116 because they address the Office's remarks in the Final Action, and thus could not have been presented earlier.

35 U.S.C. § 103 CLAIM REJECTION

Claims 1-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over several combinations of references including U.S. Patent No. 6,016,500 to Waldo (hereinafter "Waldo"), in view of U.S. Patent No. 6,721,288 to King (hereinafter "King"), in further view of U.S. Patent No. 6,212,175 to Harsch (hereinafter "Harsch"), and in further view of U.S. Patent No. 5,566,297 to Devarakonda (hereinafter "Devarakonda").

Claimed Invention

Newly added Claims 30-37 are directed to methods of, and systems for, recovering from a failure of server with a client. A layer of software called "wrapping" surrounds the connection-oriented network protocol layer (such as a TCP layer) and intercepts all communication with that layer, such as

communication originating from a network layer or a process layer. The intercepted communications and connection state information associated with intercepted communications received from the wrapping layers is logged. When it is determined that a connection with the server fails, the wrapping layers respond to the client on behalf of the server based in part, on the logged connection state information. A state of connection associated with the connection-oriented layer prior to the failure is restored, based in part, on the connection state information received from the wrapping layers. The act of restoring the state of connection associated with the connection-oriented layer is invisible to the client.

REFERENCES

The Office cites Waldo, King, Harsch, and Devarakonda in its § 103 rejection of cancelled Claims 1-14.

Waldo describes a system of using a lease for performing garbage collection, to detect a failure and to perform failure recovery (Abstract). In one implementation, a client leases storage locations that are used by programs to store data for the client. The client may access the storage locations during the lease. (Col. 14, lines 25-30). After the lease expires the client is no longer guaranteed access to the storage locations, and the server may delete the locations. (Col. 14, lines 30-46)

King is directed to reducing delays faced by user of mobile devices due to unavailability of wireless networks. (King, Col. 3, lines 35-54). King purports to use three techniques to achieve this goal: (1) asynchronous communication, (2)

using content channels that stored in cache, and (3) processing lists without server intervention.

Harsch is directed to managing a network communication systems in a client/server wireless environment. (Abstract). In particular, Harsh is concerned with maintaining a connection with server and a mobile communication unit when the mobile unit is in a low power mode or out of range. (Harsch, Col. 3, lines 50-60). The mobile unit sends packets at predetermined intervals to the server to keep the connection alive, such as prior to entering the low power mode.

Finally, Devarakonda uses client nodes to store information. If a failure is detected, information stored on the clients nodes is transferred to a back-up server. (Devarakonda, Abstract). However, all ongoing requests to that server are suspended, until information prior to the failure is restored on the back-up server prior to the failure. (Devarakonda, Abstract). Once the back-up server is restored requests can be made again, but only to the back-up server.

The aforementioned references are devoid of any teaching or suggestion of how to restore a state of connection associated with a connection-oriented layer prior to failure through the use of wrapping layers, and in a fashion that is invisible to the client.

Thus, the cited references do not teach or suggest the method of Claim 30 or the system of Claim 37 either singularly or in combination. There is simply no discussion in either Waldo, King, Harsch, and Devarakonda of restoring connections of server in a manner defined in these independent claims. Accordingly, there would be no motivation to combine Waldo, King, Harsch, and Devarakonda, to arrive at Claims 30 and 37.

Accordingly, for all the reasons described above, the combination fails to teach or suggest newly presented independent Claims 30 or 37.

Claims 31-36 depend from Claim 30 and are allowable by virtue of this dependency. Additionally, these claims recite additional features that, when taken together with those of Claim 30, define methods that are not taught or suggested by the Waldo, King, Harsch, and Devarakonda combination.

Conclusion


Pending Claims 30-37 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. If any issues remain that preclude issuance of this application, the Examiner is urged to contact the undersigned attorney before issuing a subsequent Action.

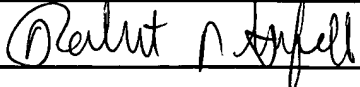
Respectfully submitted,

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